

REMARKS

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 8-22 will remain pending in the application.

Claims 1-7 have been canceled without prejudice or disclaimer to the subject matter contained therein. Support for newly added claims 8-22 can be found at pages 3-7 and 32-33 of the instant specification. These changes do not introduce new matter into the application as originally filed, and their entry is thus respectfully requested.

In the Office Action of March 27, 2002, the Examiner has set forth a number of grounds for rejection. Each of these grounds of rejection are respectfully traversed, and are individually addressed and discussed in detail below.

***Rejections under 35 U.S.C. § 101/§ 112, Second Paragraph***

Claim 6 stands rejected under 35 U.S.C. § 101/§ 112, second paragraph, for the reasons set forth at page 2 of the Office Action. Claims 1-5 and 7 stand rejected under 35 U.S.C. § 112, second paragraph for the reasons set forth at page 3 of the Office Action. Reconsideration and withdraw of each of these grounds of rejection is required based on the following considerations.

Applicants have canceled claim 1-7 and have added new claims 8-22 in an effort to more particularly and distinctly set forth

the inventive discovery that the inventors regard as their own. Notably, 35 USC § 112, second paragraph requires no more of applicants, so it follows that each of the pending claims 8-22 are fully acceptable under this statute. Likewise, regarding the earlier rejection under 35 USC § 101 it is noted that none of the instantly pending claims 8-22 are a so called "use" claim and all meet the requirements of 35 USC § 101 to recite a proper utility.

Accordingly, withdraw of each of the outstanding rejections under 35 USC § 101 and 112 is required.

#### ***Rejections Under 35 U.S.C. § 102/103***

Claims 1-5 and 7 stand rejected under 35 U.S.C. § 102(a) and (b) as being anticipated by either "*Fundamentals of Machine Operation*" or Yamashita (US 5,549,729). Claims 1-5 and 7 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of "*Fundamentals of Machine Operation*" and Yamashita (US 5,549,729). Reconsideration and withdraw of each of these grounds of rejection are respectfully traversed based on the cancellation of original claims 1-7 herein, the addition of new claims 8-22 and the following considerations.

#### **Anticipation Issues**

For anticipation under 35 U.S.C. § 102, a reference "must teach every aspect of the claimed invention either explicitly or

impliedly. Any feature not directly taught must be inherently present." (MPEP §706.02, Rejection on Prior Art [R-1]). The Federal Circuit has held that prior art is anticipatory only if every element of the claimed invention is disclosed in a single item of prior art in the form literally defined in the claim (Jamesbury Corp. v. Litton Indus. Products, 756 F.2d 1556, 225 USPQ 253 (Fed. Cir. 1985); Atlas Powder Co. v. du Pout; 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); American Hospital Suppl v. Travenol Labs, 745 F.2d 1, 223 USPQ 577 9Fed. Cir. 1984).

The USPTO asserts in support of the outstanding rejections that Yamashita teaches the utility of a wide variety of compounds to stimulate plant growth, and that the *Fundamentals* reference teaches the basics of fertilizer application.

In response to such contentions on the part of the USPTO, it is noted that neither the *Fundamentals* nor Yamashita reference teaches or suggests the complete invention as recited in instant independent claim 8 (e.g., neither reference teaches "a 5% improved reproduction degree of green cells within 15 days after an effective concentration of the plant activator has been given to a plant"), or any of the specific limitations/properties (a) - (e) recited in instant claim 9.

Moreover, while the USPTO may assert that certain functional characteristics as described in original claims 1-5 and 7 would inherently describe the materials used in the references, Applicants

call the USPTO's attention to the fact that it is well known in the art that different fertilizers have different effects on plant growth, such that it is almost meaningless for the USPTO to simply assert in a broad fashion that the properties of the instantly claimed invention are inherently possessed by compositions, etc., of the cited art. For example, to the extent the present anticipation rejection relies on such an inherency argument, it at best is based on a contention that one skilled in the art might arrive at a plant-activating agent of the present invention upon reviewing the cited art with hindsight - however, such a standard for determining inherency is not sufficient to support a rejection under 35 USC § 102, since inherency must be certain - a necessary result and not merely a possible result. *Ex parte Cyba*, 155 USPQ 756 (POBA 1966), *Ex parte Skinner*, 2 USPQ2d 1788 (BPAI 1986), *In re Oelrich*, 666 F2d 578, 212 USPQ 323 (CCPA 1981). Thus, because there is nowhere taught or disclosed in either of the Yamashita or *Fundamentals* reference a plant-activating agent that possesses the specific enhancing effects and properties as recited in claim 8 or 9, it follows that neither of the cited references are capable of anticipating the instant invention as recited in claims 8-9 and the claims that ultimately depend therefrom (claims 10-22).

Accordingly, withdrawal of the outstanding 35 U.S.C. § 102 rejections is respectfully requested.

Obviousness Issues

To establish a *prima facie* case of obviousness of a claimed invention under 35 U.S.C. § 103(a), all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

In this case, as discussed above, neither Yamashita nor the *Fundamentals* reference teach or suggest the specific growth enhancing characteristics of the present invention e.g., their specific effect on reproduction of green cells. Moreover, even upon combining the cited references' disclosures, there is provided no teaching, disclosure or motivation to those of ordinary skill in the art that would cause or allow them to arrive at the present invention as claimed, including all its recited limitations. Absent such motivation in the cited art the USPTO's rejection over the Yamashita and *Fundamentals* references cannot be sustained. This conclusion does not change whether such references are considered singularly or in combination.

As a standard for determining obviousness, the USPTO's attention is now directed to several recent cases of the Federal Circuit that related to rejections under 35 USC § 103 and the issues of an improper level of hindsight reconstruction and/or a lack or

motivation existing in the cited art being applied by the USPTO. It is submitted that the standards set forth by the Federal Circuit in these cases for determining obviousness, warrant allowance of the present claims when applied to the instant application and claims.

As stated by the Court of Appeals for the Federal Circuit in the case of *In re Lee*, 61 USPQ2d 1430 (2002):

As applied to the determination of patentability *vel non* when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. §103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983). The essential factual evidence on the issue of obviousness is set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the Graham factors).

"The factual inquiry whether to combine references must be thorough and searching." *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998))); *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d

1614, 1617(Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637(Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600(Fed. Cir. 1988) ("teachings of references can be combined only if there is some suggestion or incentive to do so.") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933(Fed. Cir. 1984)).

The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317(Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783(Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

As stated by the Court of Appeals for the Federal Circuit in the case of *In re Kotzab*, 55 USPQ2d 1313 (2000):

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one

of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617. Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." *Id.* (quoting *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. See *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See *id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See *id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. See *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. See *B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. See *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See *WMS Gaming, Inc. v. International Game Tech.*, 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See



*In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein). Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. See *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence." *Id.*

As stated by the Court of Appeals for the Federal Circuit in the case of *In re Dembiczak*, 50 USPQ2d 1614 (1999):

A claimed invention is unpatentable if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. Section 103(a) (Supp. 1998); see *Graham v. John Deere Co.*, 383 U.S. 1, 14, 148 USPQ 459, 465 (1966). The ultimate determination of whether an invention is or is not obvious is a legal conclusion based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. See *Graham*, 383 U.S. at 17-18, 148 USPQ at 467; *Miles Labs, Inc., Inc. v. Shandon Inc.*, 997 F.2d 870, 877, 27 USPQ2d 1123, 1128 (Fed. Cir. 1993). ...

Our analysis begins in the text of section 103 quoted above, with the phrase "at the time the invention was made." For it is this phrase that guards against entry into the "tempting but forbidden zone of hindsight," see *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 873, 228 USPQ 90, 98 (Fed. Cir. 1985), overruled on other grounds by *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 46 USPQ2d 1097 (Fed. Cir. 1998), when analyzing the patentability of claims pursuant to that section. Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540,

1553, 220 USPQ 303, 313 (Fed. Cir. 1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998) (describing "teaching or suggestion or motivation [to combine]" as an "essential evidentiary component of an obviousness holding"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("the Board must identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them"); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (examiner can satisfy burden of obviousness in light of combination "only by showing some objective teaching [leading to the combination]"); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (evidence of teaching or suggestion "essential" to avoid hindsight); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297, 227 USPQ 657, 667 (Fed. Cir. 1985) (district court's conclusion of obviousness was error when it "did not elucidate any factual teachings, suggestions or incentives from this prior art that showed the propriety of combination"). See also *Graham*, 383 U.S. at 18, 148 USPQ at 467 ("strict observance" of factual predicates to obviousness conclusion required). Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight. See, e.g., *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time."). In this case, the Board fell into the hindsight trap.

We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), *Para-Ordinance Mfg. v. SGS Imports Intern., Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although "the suggestion more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." E.g., *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977).

Therefore, based on the above considerations, it is submitted that the cited *Yamashita* and *Fundamentals* references do not support a *prima facie* case of obviousness. This ground of rejection has been obviated and thus, withdrawal of 35 U.S.C. § 103 rejection is respectfully requested.

#### CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed

that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to contact Ping Wang, M.D. (Reg. No. 48,328) at the offices of Birch, Stewart, Kolasch & Birch, LLP.

Prompt and favorable consideration of this Response is respectfully requested.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-7 have been cancelled.

Claims 8-22 have been added.